

WHAT IS CLAIMED IS:

1. A method of forming a solid conductive rod, comprising:

providing a printed circuit board, wherein the printed circuit board includes an insulating core layer, a first conductive layer and a second conductive layer  
5 with the insulating core layer sandwiched between the first conductive layer and the second conductive layer;

forming a first opening over the first conductive layer, wherein the first opening exposes a portion of the insulating core layer;

conducting a drilling operation to remove the exposed insulating core  
10 layer and form a second opening, wherein the second opening exposes a portion of the second conductive layer; and

conducting an electroplating process using the second conductive layer as a negative electrode to fill the first and the second opening solidly with a conductive material.

15 2. The method of claim 1, wherein conducting the drilling operation includes drilling with a laser beam or a drill bit.

3. The method of claim 1, wherein forming the first opening further includes:

forming a first patterned mask layer enclosing the printed circuit board, wherein the first patterned mask layer has a third opening exposing a portion of the first  
20 conductive layer; and

removing the exposed first conductive layer to form the first opening.

4. The method of claim 3, wherein after forming the first opening, further includes removing the first patterned mask layer.

5. The method of claim 3, wherein material forming the first patterned mask layer is selected from a group consisting of photoresist and photosensitive polyimide.

6. The method of claim 1, wherein before the electroplating process, further includes forming a second patterned mask layer enclosing the printed circuit board and exposing the second opening and an edge portion of the second conductive layer, wherein the exposed edge portion of the second conductive layer serves as an electroplating electrode.

7. The method of claim 6, wherein after electroplating process, further includes removing the second patterned mask layer.

8. The method of claim 6, wherein material forming the first patterned mask layer is selected from a group consisting of photoresist and photosensitive polyimide.

9. The method of claim 1, wherein the material constituting the conductive layers includes copper.

10. The method of claim 1, wherein conductive material includes copper.

11. The method of claim 1, wherein the electroplating process further includes filling up the first opening and the second opening with a portion of electroplated material protruding above the first opening and subsequently removing the protruding electroplated material.

12. The method of claim 11, wherein the protruding electroplated material is removed by sanding with a sanding machine.

13. The method of claim 11, wherein the protruded electroplated material is removed by grinding with a wheel grinder.

14. The method of claim 1, wherein the printed circuit board includes an integrated circuit carrier.